UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/517,695	12/13/2004	Mark J Evans	36119.159US4	1897

49598 7590 04/14/2008

WilmerHale/Wyeth
60 STATE STREET
BOSTON, MA 02109

EXAMINER	
ZARA, JANE J	

ART UNIT	PAPER NUMBER
1635	

MAIL DATE	DELIVERY MODE
04/14/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/517,695	EVANS ET AL.	
	Examiner	Art Unit	
	Jane Zara	1635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14,16 and 18-20* is/are pending in the application.

4a) Of the above claim(s) *13 and 19* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12,14,16,18 and 20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10-23-06,9-6-06,3-11-05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This Office action is in response to the communication filed 3-21-08.

Claims 1-14, 16 and 18-20 are pending in the instant application.

Election/Restrictions

Applicant's election with traverse of Group I, claims 1-12, 14, 16, 18 and 20, and SHP, the CYP8B1 promoter/gene reporter, small molecules, luciferase, adenovirus vector, CMV promoter and a human hepatoblastoma cell line in the reply filed on 3-21-08 is acknowledged. The traversal is on the ground(s) that a search of the subject matter of claim 19 would require no additional burden, that claim 1 is generic and therefore should be examined accordingly, and that the election of molecules, etc listed above should constitute species elections. This is not found fully persuasive because the inventions comprising CYP8B1 or CYP7A1 are drawn to chemically, functionally, biologically and structurally distinct and as such are not considered species, but distinct inventions. In addition, the method of claim 19 comprises additional and distinct steps and compositions, and measures biological outcomes that are not present or required in the method of Group I, and so are patentably distinct from the elected invention of Group I. The other elections of record listed above, however, (small molecule, luciferase, adenovirus vector, CMV promoter and human hepatoblastoma cell line) are considered species elections and will be examined as set forth below.

The requirement is still deemed proper and is therefore made FINAL.

Claims 13, 19, FXR and CYP7A1 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention or species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3-21-08.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-12, 14, 16, 18 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 5-6, the recitation of "CYP8B1 promoter/detectable substance gene reporter" is unclear (e.g. Is this to be mean a reporter gene operably linked to the CYP8B1 promoter, or is it to mean that a reporter gene is inserted within the promoter?).

Appropriate clarification is required.

In claim 2, line 2, it is unclear whether the recombinant SHP is the same SHP that is listed in claim 1, line 4. It is also unclear how the same molecule can be a candidate agent AND be a part of the assay used to measure the effect of the candidate agent.

Appropriate clarification is required.

The metes and bounds of "an altered cell culture" (claim 6) and "an infected cell culture" (claim 8) are unclear.

Appropriate clarification is required.

In claim 16, lines 2-3, and in claim 18, lines 6-8, it is unclear what is meant by the CYPB81 promoter comprising inflammatory genes ICAM-1 or M-CSF (e.g. Does this mean that the inflammatory genes are operably linked and downstream of the CYPB81 promoter, or are these inflammatory genes inserted somewhere within the promoter sequence?).

Appropriate clarification is required.

Claims 1-12, 14, 16 and 18 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01.

It is unclear how measuring the difference in the expression of a detectable substance, as set forth in claim 1, will provide for unambiguously determining that the candidate agent inhibits SHP. A change in the expression of the detectable substance can be presumed to be due to various factors, including modulating CYP8B1, or modulating any other components in the cell that in turn have an effect on CYP8B1 promoter activity (e.g. including, but not limited to modulating SHP).

The steps that unambiguously allow for the selection of agents that are effective for inhibiting SHP (expression or activity) are missing from the claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-7, 9, 12, 14 and 20 are rejected under 35 U.S.C. 102(a) as being anticipated by Zhang et al (J. Biol. Chem., Vol. 276, No. 45, pages 41,690-41,699, (2001)).

Zhang et al (J. Biol. Chem., Vol. 276, No. 45, pages 41,690-41,699, 2001) teach methods of identifying agents effective at inhibiting SHP comprising administering a candidate agent to a transfected HepG2 cell culture, which cell culture expresses SHP and a firefly luciferase reporter construct operably linked and downstream of a CYP8B1 promoter, and comprising recombinant expression vectors comprising a CMV promoter, which methods involve assaying the cell culture for luciferase expression in the presence and absence of the candidate agent, as well as comparing the differences in agent effects in control cells not expressing SHP (abstract and introduction on page 41,690-41,691; first, second, fifth-eighth paragraphs of the Experimental Procedures section, pages 41,691-2; figures 5, 6, 8, page 41,695; first full paragraph on page 41,696; figure 10 on p. 41,697; last two paragraphs, pages 41,698-9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-12, 14 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang et al (J. Biol. Chem., Vol. 276, No. 45, pages 41,690-41,699, (2001)) as applied to claims 1-7, 9, 12, 14 and 20 above, and further in view of Bauer et al (US 20030130296), Ferran et al (US 20010053769) and Fillmore et al (USPN 6,316,181) insofar as the claims are drawn to methods of identifying agents effective at inhibiting SHP comprising administering a candidate agent to a transfected HepG2 cell culture, which cell culture expresses SHP and a firefly luciferase reporter construct operably linked and downstream to a CYP8B1 promoter, and which method utilizes recombinant expression vectors comprising a CMV promoter, and optionally comprising a replicative deficient adenoviral vector, and which method involves assaying the cell culture for luciferase expression in the presence and absence of the candidate agent, and comparing the differences in agent effects in control cells not expressing SHP.

Zhang et al (J. Biol. Chem., Vol. 276, No. 45, pages 41,690-41,699, (2001)) is relied upon as set forth in the 102 rejection above.

Zhang does not teach screening methods using replication defective adenoviral vectors.

Fillmore et al (USPN 6,316,181) teach the routine use of retroviral vectors, including replication deficient adenoviral vectors for use in the expression of recombinant genes (see col. 4, line 20-54).

It would have been obvious to one of ordinary skill in the art to utilize replication deficient adenoviral vectors in the screening methods previously taught by Zhang et al because Fillmore taught the routine use of well known replication deficient adenoviral vectors for use in the expression of recombinant genes. One would have been motivated to use these vectors because they are well known to provide for the safe transformation of target cells, and to drive successful expression of recombinant gene products in transformed cells in vitro. One of ordinary skill in the art would reasonably expect that the screening methods disclosed previously by Zhang would successfully employ the use of replication deficient adenoviral vectors.

For these reasons the instant invention would have been obvious to one of ordinary skill in the art at the time the invention was made.

Conclusion

Certain papers related to this application may be submitted to Art Unit 1635 by facsimile transmission. The faxing of such papers must conform with the notices

published in the Official Gazette, 1156 OG 61 (November 16, 1993) and 1157 OG 94 (December 28, 1993) (see 37 C.F.R. ' 1.6(d)). The official fax telephone number for the Group is 571-273-8300. NOTE: If Applicant does submit a paper by fax, the original signed copy should be retained by applicant or applicant's representative. NO DUPLICATE COPIES SHOULD BE SUBMITTED so as to avoid the processing of duplicate papers in the Office.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jane Zara whose telephone number is (571) 272-0765. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Douglas Schultz, can be reached on (571) 272-0763. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jane Zara
4-8-08

/Jane Zara/

Primary Examiner, Art Unit 1635